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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

BAKER, STEPHEN M

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,532

Applicant(s)

SHARMA, DEBENDRA DAS

Examiner

Stephen M. Baker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,675,344. Although the conflicting claims are not identical, they are not patentably distinct from each other because: present claims 1-20 claim the same subject matter as recited by claims 1-15 of the patent, wherein present claims 1, 3, 4 and 6 in combination correspond to claim 1 of the patent, present claim 2 corresponds to claim 2 of the patent, present claim 5 corresponds to claim 3 of the patent, present claims 7-9 respectively correspond to claims 4-6 of the patent, present claims 10, 12 and 13 in combination correspond to claim 7 of the patent, present claim 11 corresponds to claim 8 of the patent, and present claims 14-20 respectively correspond to claims 9-15 of the patent.

Claim Objections

3. Claims 1 and 5 are objected to because of the following informalities:

In claim 1: in line 4, "the transaction" apparently should be "a transaction".

In claim 5: in line 5, "one or packets" apparently should be "one or more packets". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6, 8-10, 13, 14 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,555,382 to Thaller *et al* (hereafter "Thaller").

Thaller discloses a multi-processor system including a 128-bit system bus (28) that carries each 256-bit cache line "transaction" in two 128-bit portions (col. 7, lines 47-53). Each 128-bit portion consists of two even-address 'data slices' and two odd-address 'data slices' (col. 8, lines 3-18). Each 'data slice' is protected by its own ECC (col. 59, lines 49-61).

With reference to the language of the claims, Thaller's ECC generation requires "an ECC encoder, the ECC encoder applying a first ECC code of a first portion of the transaction and a second ECC code to a second portion of the transaction", where each

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"portion" can be either one half of a 256-bit cache line, or one data slice. Thaller's ECC decoding further requires "a decoder that decodes the first and second ECC codes".

Regarding claims 6, 13 and 14, each half of a cache line in Thaller's system can be considered to be a system bus "packet".

Regarding claims 8 and 16, as Thaller's ECC can detect an error on the system bus, Thaller's ECC can detect a system bus "wire failure".

Regarding claims 9 and 17, Each of Thaller's cache lines is provided by eight (39, 32) ECC codewords on the system bus, which accordingly includes a "third ECC code".

Regarding claim 18, the "transactions and an amount of information to be protected" are defined in Thaller's system.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 7, 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thaller.

Thaller discloses that two sets of seven ECC bits (bits 6:0, 20:14) on a check bus (220) are associated with the even slices, and two sets of seven ECC bits (bits 13:7, 27:21) are similarly associated with the odd slices (col. 9, lines 14-24), which indicates

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that a (39, 32) ECC is used to protect each 32-bit 'data slice'. Thaller does not specify the error detection and correction capacity of the (39, 32) ECC.

Official Notice is given that the double-error-detection advantage of providing a SEC-DED property for a (39, 32) ECC was well known at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Thaller's (39, 32) ECC as a typical SEC-DED code. Such an implementation would have been obvious because the double-error-detection advantage of providing a SEC-DED property for a (39, 32) ECC was already well known.

Regarding claim 15, a typical (39, 32) SEC-DED code includes an overall parity bit.

Conclusion

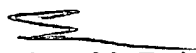
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Baker whose telephone number is (703) 305-9681. The examiner can normally be reached on Monday-Friday (11:00 AM - 7:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen M. Baker
Primary Examiner
Art Unit 2133

smb